

New Developments in Biotechnology, 3

GENETICALLY ENGINEERED ORGANISMS IN THE ENVIRONMENT

29 May, 1987

**Biological Applications Program
Office of Technology Assessment
Congress of the United States**

OTA DRAFT: DO NOT CITE, QUOTE, OR REPRODUCE

New Developments In Biotechnology

Advisory Panel

Bernadine P. Healy, *Panel Chair*
The Cleveland Clinic Foundation
Cleveland, OH

Timothy B. Atkeson
Steptoe & Johnson
Washington, DC

Sheldon Krimsky
Tufts University
Medford, MA

David Blumenthal
Brigham and Women's Hospital Corporation
Boston, MA

Joshua Lederberg
The Rockefeller University
New York, NY

Hon. Edmund G. Brown, Jr.
Reavis & McGrath
Los Angeles, CA

William E. Marshall
Pioneer Hi-Bred International, Inc.
Johnston, IA

Nancy L. Buc
Weil, Gotshal & Manges
Washington, DC

Ronald L. Meeusen
Rohm and Haas Company
Spring House, PA

Mark F. Cantley
Concertation Unit for Biotechnology in Europe
Brussels, Belgium

Robert B. Nicholas
Blum, Nash & Railsback
Washington, DC

Alexander M. Capron
University of Southern California
Los Angeles, CA

Eric J. Stanbridge
University of California, Irvine
Irvine, CA

Jerry D. Caulder
Mycogen Corporation
San Diego, CA

James M. Tiedje
Michigan State University
East Lansing, MI

Lawrence I. Gilbert
The University of North Carolina
Chapel Hill, NC

Kunio Toriyama
ZEN-NOH
Tokyo, Japan

Conrad A. Istock
The University of Arizona
Tucson, AZ

Pablo D.T. Valenzuela
Chiron Corporation
Emeryville, CA

Edward L. Korwek
Keller and Heckman
Washington, DC

Thomas E. Wagner
Ohio University
Athens, OH

Tsune Kosuge
University of California, Davis
Davis, CA

Luther S. Williams
Atlanta University
Atlanta, GA

Richard Krasnow
Arlington, VA

OTA is grateful for the valuable assistance and thoughtful critiques provided by the Advisory Panel members. The views expressed in this OTA report, however, are the sole responsibility of the Office of Technology Assessment.

New Developments in Biotechnology

OTA/National Science Foundation Workshop
Environmental Applications of Recombinant DNA Organisms: Genetic Issues
November 21-22, 1985

David T. Kingsbury, *Workshop Chair*
National Science Foundation
Washington, DC

Deb K. Chatterjee
Environmental Protection Agency
Gulf Breeze, FL

Ron Chiarello
IGB Products, Ltd.
San Leandro, CA

Michael T. Clegg
University of California, Riverside
Riverside, CA

William R. Engels
University of Wisconsin
Madison, WI

Garrett Hardin
University of California, Santa Barbara
Santa Barbara, CA

Bruce Levin
University of Massachusetts
Amherst, MA

Lois K. Miller
University of Georgia
Athens, GA

Stephen J. O'Brien
National Cancer Institute
Frederick, MD

Mark Obukowicz
Monsanto Company
St. Louis, MO

Philip Regal
University of Minnesota
Minneapolis, MN

James A. Shapiro
University of Chicago
Chicago, IL

James Tiedje
Michigan State University
East Lansing, MI

Richard G. Wiegart
University of Georgia
Athens, GA

OTA is grateful for the valuable assistance and thoughtful critiques provided by the Workshop participants. The views expressed in this OTA report, however, are the sole responsibility of the Office of Technology Assessment.

Genetically Engineered Organisms In The Environment

OTA Project Staff

Roger C. Herdman, Assistant Director, OTA Health and Life Sciences Division
Gretchen S. Kolsrud, Biological Applications Program Manager
Gary B. Ellis, Project Director

Luther Val Giddings, Study Director
Robyn Y. Nishimi, Analyst
Kevin W. O'Connor, Analyst

Support Staff

Sharon Kay Oatman, Administrative Assistant
Linda S. Rayford, Secretary/Word Processing Specialist
Barbara V. Ketchum, Clerical Assistant

Editor

Stephanie L. Forbes

Contractors

David A. Andow, University of Minnesota, St. Paul, MN
John M. Boyle, Louis Harris and Associates, Inc., Washington, DC
William A. Check, Medical & Scientific Communications, Atlanta, GA
Ellen W. Chu, Kirkland, WA
David C. Coleman, University of Georgia, Athens, GA
C. N. Dahm, University of New Mexico, Albuquerque, NM
Andrew P. Dobson, University of Rochester, NY
Patrick W. Flanagan, National Science Foundation, Washington, D.C.
James R. Gosz, University of New Mexico, Albuquerque, NM
Fred Gould, North Carolina State University, Raleigh, NC
Susan S. Hirano, University of Wisconsin, Madison, WI
Robert E. Hodson, University of Georgia, Athens, GA
Conrad A. Istock, University of Arizona, AZ
Kathleen H. Keeler, University of Nebraska, Lincoln, NE
D. Matthew Knain, Louis Harris and Associates, Inc., Washington, DC
Richard E. Lenski, University of California, Irvine, CA
Bruce R. Levin, University of Massachusetts, Amherst, MA
Simon A. Levin, Cornell University, Ithaca, NY
Adrienne Massey, North Carolina State University, Raleigh, NC
Elliott A. Norse, Washington, DC
Stuart L. Pimm, University of Tennessee, Knoxville, TN
Frances E. Sharples, Oak Ridge National Laboratory, TN
S.S. Snapp, University of Minnesota, St. Paul, MN
P.S. Teng, University of Minnesota, St. Paul, MN
Christen D. Upper, University of Wisconsin, Madison, WI
Gabor Vali, University of Wyoming, Laramie, WY

Acknowledgment to Other OTA Staff

Robert Friedman, Senior Associate, Oceans and Environment Program

OTA DRAFT: DO NOT CITE, QUOTE, OR REPRODUCE